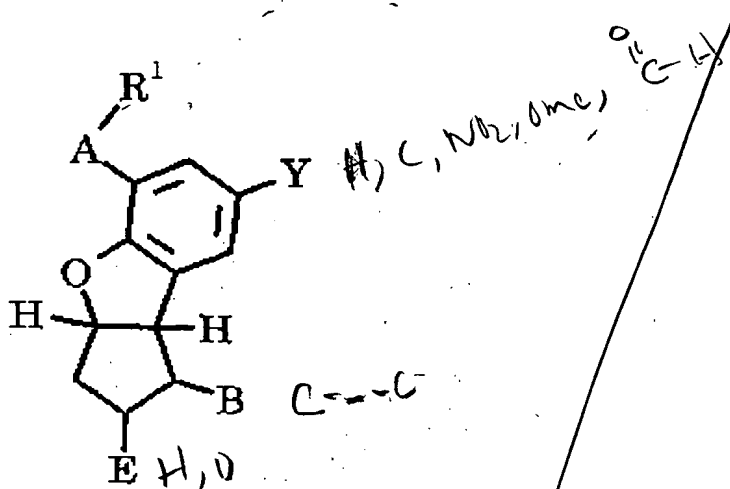


CLAIMS

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1. A sustained-release pharmaceutical composition for an ionic prostanoic acid derivative comprising an prostanoic acid derivative and an ionic compound having an opposite charge to that of the ionic prostanoic acid derivative and increasing hydrophobicity of the prostanoic acid derivative.
2. A sustained-release pharmaceutical composition according to claim 1, wherein the ionic compound having an opposite charge to the ionic prostanoic acid derivative and increasing the hydrophobic property of the prostanoic acid derivative contains a hydrophobic group in the molecule thereof.
3. A sustained-release pharmaceutical composition according to claim 1 or 2, wherein the ionic prostanoic acid derivative is a prostaglandin I₂ derivative.
4. claim 1 A sustained-release pharmaceutical composition according to any one of claims 1 through 3, wherein the ionic prostaglandin I₂ derivative is a compound represented by the following general formula (I):
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wherein R^1 represents $COOR^2$ (wherein R^2 represents:

- 1) hydrogen or a pharmacologically acceptable cation,
- 2) $-Z-Ar^1$, wherein Z is a valence bond or a straight or branched alkylene shown by C_tH_{2t} wherein t is an integer of 1 to 6, and Ar^1 is 2-pyridyl, 3-pyridyl or 4-pyridyl;

- 3) $-C_tH_{2t}COOR^3$, wherein C_tH_{2t} has the same significance as defined above, and R^3 is hydrogen or a pharmacologically acceptable cation;

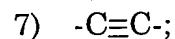
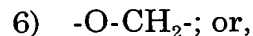
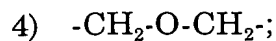
or,

- 4) $-C_tH_{2t}N(R^4)_2$, wherein C_tH_{2t} has the same significance as defined above, and R^4 is hydrogen, a straight alkyl having 1 to 12 carbon atoms or a branched alkyl having 3 to 14 carbon atoms);

A represents:

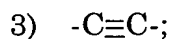
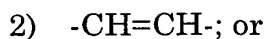
- 1) $-(CH_2)_m-$, wherein m is an integer of 1 to 3;
- 2) $-CH=CH-CH_2-$;
- 3) $-CH_2-CH=CH-$;

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Y represents hydrogen, an alkyl having 1 to 4 carbon atoms, chlorine, bromine, fluorine, formyl, methoxy or nitro;

B represents $-\text{X}-\text{C}(\text{R}^5)(\text{R}^6)\text{OR}^7$ (wherein R^5 represents hydrogen or an alkyl having 1 to 4 carbon atoms; R^7 represents hydrogen, an acyl having 1 to 14 carbon atoms, an aroyl having 6 to 15 carbon atoms, tetrahydropyranyl, tetrahydrofuranyl, 1-ethoxyethyl or t-butyl; X represents:



R^6 represents:

1) a straight alkyl having 1 to 12 carbon atoms or a branched alkyl having 3 to 14 carbon atoms;

2) $-\text{Z}-\text{Ar}^2$, wherein Z has the same significance as defined above and Ar^2 is phenyl, α -naphthyl, β -naphthyl or a phenyl substituted with at least one of chlorine, bromine, fluorine, iodine, trifluoromethyl, an alkyl having 1 to 4 carbon atoms, nitro, cyano, methoxy, phenyl or phenoxy;

3) $-\text{C}_t\text{H}_{2t}\text{OR}^8$, wherein C_tH_{2t} has the same significance as

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00000000000000000000000000000000

5) $-\text{C}_t\text{H}_{2t}-\text{CH}=\text{C}(\text{R}^{10})\text{R}^{11}$, wherein C_tH_{2t} has the same significance as defined above, and R^{10} and R^{11} represent hydrogen, methyl, ethyl, propyl or butyl; or

E represents hydrogen or -OR¹³, wherein R¹³ is hydrogen, an acyl having 1 to 12 carbon atoms, an aroyl having 7 to 18 carbon atoms, a straight alkyl having 1 to 12 carbon atoms or a branched alkyl having 3 to 14 carbon atoms; or a salt thereof.

5. A sustained-release pharmaceutical composition according to Claim 1, wherein the ionic compound increases the ~~any one of claims 1 through 4~~ any one of claims 1 through 4, wherein the ionic compound increases the

oil/water partition ~~coefficient~~ ^B of the ionic prostanoic acid derivative.

6. ~~Claim 1~~
~~any one of claims 1 through 5~~, wherein the ionic compound is incorporated at least in an equimolar amount based on the ionic prostanoic acid derivative in terms of a charge ratio.

7. ~~Claim 1~~
~~any one of claims 1 through 6~~, wherein the ionic prostanoic acid derivative is anionic.

8. A sustained-release pharmaceutical composition according to claim 7, wherein the ionic compound is a compound containing a group selected from an ammonium, pyridinium, phosphonium and sulfonium group in the molecule thereof, or a salt thereof.

9. A sustained-release pharmaceutical composition according to claim 8, wherein the ionic compound contains at least one member selected from the group consisting of an alkyldimethylbenzylammonium salt, an alkyltrimethylammonium salt, an alkylpyridinium salt, an alkylamine salt and an alkylphosphonium salt.

10. A sustained-release pharmaceutical composition according to claim 9, wherein the ionic compound is benzalkonium chloride.

11. ~~Claim 1~~
~~any one of claims 1 through 10~~, wherein the ionic prostanoic acid derivative is a synthetic ionic prostanoic acid derivative.

12. A sustained-release pharmaceutical composition according to

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Claim 1
~~any one of claims 1 through 11, wherein the prostaglandin I₂ derivative~~
is (±)-(1R*,2R*,3aS*,8bS*)-2,3,3a,8b-tetrahydro-2-hydroxy-1-[(E)-(3S*)-
3-hydroxy-4-methyl-1-octen-6-ynyl]-1H-cyclopenta[b]benzofuran-5-
butanoic acid, or a salt thereof.

13. A sustained-release pharmaceutical composition according to
Claim 1
~~any one of claims 1 through 6, wherein the ionic prostanoid acid~~
derivative is cationic.

14. A sustained-release pharmaceutical composition according to
claim 13, wherein the ionic compound is a compound containing a
carboxyl, sulfate, sulfonate or phosphate group in the molecule thereof,
or a salt thereof.

15. A sustained-release pharmaceutical composition according to
claim 14, wherein the ionic compound is sodium lauryl sulfate and/or
sodium oleate.

16. A sustained-release pharmaceutical composition according to
Claim 13
~~any one of claims 13 through 15, wherein the ionic prostanoid acid~~
derivative is a synthetic ionic prostanoid acid derivative.

*add
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